

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and comments.

### Status of the claims

Claims 1, 2, 4, 7, 9-14, 18, and 21 were pending in the subject application. With this submission, all of the claims have been amended and claims 4 and 21 have been deleted. Upon entry of this paper, therefore, claims 1, 2, 7, 9-14, and 18 will remain pending and under active consideration.

### Rejections under 35 U.S.C. § 103

Claims 1, 2, 4, 7, 9-14, 18, and 21 stand rejected over U.S. Patent No. 6,171,586 in view of U.S. Patent No. 5,677,165. The examiner maintains that, because the '165 patent discloses the use of glutamate buffers to minimize pH changes to a solution, one of ordinary skill in the art would have been motivated to combine its teachings with antibody formulations taught in the '586 patent, with a reasonable expectation of success in doing so. Office action, item no. 6.

Previously, applicants had advanced the contrary position that, even if the references were presumed to be combined properly in this regard, it still would be the case that neither reference nor their combination undercuts the unpredictably superior results documented by the present inventors' claimed antibody formulation. *See, e.g.*, Declaration of Eiji Sawa. Examiner Kim, however, has determined that the declaration "is not sufficient to demonstrate the unexpected results of the full breadth of the claimed invention." Office action, item no. 6.

Concerning the scope of the claims, the examiner opines that the open transitional term "comprising" accommodates "other additives (e.g., pH adjusting agent, stabilizer, etc.)". Office action, item no. 3. In good faith effort to advance prosecution, applicants have amended the claims to a formulation "consisting of" an antibody against CD40, sorbitol, a polysorbate and glutamate, as suggested by the examiner.

The examiner has also determined that "the declaration is not sufficient to demonstrate the asserted unexpected results." *Id.* In particular, examiner Kim alleges that because U.S. Patent No. 6,875,432 defines a "stable" protein formulation as having

“preferably less than about 5% of the protein [] present as an aggregate,” which range encompasses the percent aggregation observed with the claimed invention, the evidence proffered with the declaration could not have been unexpected. *Id.* Applicants cannot agree.

Applicants do not dispute that formulations capable of limiting protein aggregation to less than about 5% may have been known in the art. Rather, Applicants maintain that the stability of a specific protein (*i.e.*, antibody against CD40) observed in a specific formulation claimed (*i.e.*, sorbitol, a polysorbate and glutamate) would have been unexpected in view of the stability of the same protein in buffers (*e.g.*, citrate) heretofore considered equivalent. In other words, prior to the present disclosure, the ordinary artisan had no reason to expect *any* difference in protein stability between, *e.g.*, citrate, and glutamate buffer, let alone a difference of the magnitude observed. The fact that there is a *difference* is unexpected, not necessarily the *magnitude* of the difference or the absolute percent stability.

On this note, the ‘432 patent, other than defining “stability,” discloses no more than the art already of record. First, applicants submit that the skilled artisan would have had no reason or incentive to select a glutamate buffer from among the near infinite alternatives suggested by the reference. *See Summary of the Invention.* Indeed, the ‘432 patent in no way highlights glutamate buffers among a genus of equally suitable buffers. M.P.E.P. § 2144.08(II)(4). Second, even if it were assumed, *arguendo*, that the skilled artisan could have deduced from the cited reference(s) a select number of buffers, then the artisan still could not have foreseen or reasonably expected the noted advantages of a glutamate-containing buffer instead of ostensibly similar buffers.

Thus, the obviousness rejection is unsustainable and its withdrawal is respectfully solicited.

#### **Rejections under 35 U.S.C. § 112**

Claims 1, 2, 4, 7, 9-14, 18, and 21 stand rejected as allegedly containing subject matter unsupported by the specification. Specifically, the examiner alleges that the specification does not provide written description for the phrase “glutamate as sole buffer”. Although applicants respectfully disagree, without acquiescing to the propriety of the rejection, the term “sole” has been deleted from the claims, thereby mooting the rejection.

## CONCLUSION

Applicants submit that this application is in condition for allowance, and they request an early indication to this effect. Examiner Kim is invited to contact the undersigned directly, should he feel that any issue warrants further consideration.

The Commissioner is hereby authorized to charge any additional fees, which may be required under 37 C.F.R. §§ 1.16-1.17, and to credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extension is needed for timely acceptance of submitted papers, applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of the relevant fee(s) from the deposit account.

Respectfully submitted,

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